Name: _____ TP: _____

FORM A

HW: ACT <PLAN> Practice #4
Geometry
DUE: Monday. March 17th. 2014

Failure to show work on any problem will result in LaSalle. Only circling an answer choice is NOT acceptable – show me how you are SOLVING these problems!

#'s 1-10 DUE FRIDAY!!!

1. Find the average of two 3's and a 6.
   A. 4.5
   B. 3
   C. 6
   D. 4

(Add & then divide)

3 3 6

2. What is the average of four 1's and two 7's?
   A. 1
   B. 3
   C. 7
   D. 4

3. To find the average of five 7's and four 3's, what must you divide by?
   A. 5
   B. 7
   C. 9
   D. 11

(Mean = Average)

4. What is the mean of two 2's, three 3's, and one 5?
   A. $3\frac{1}{3}$
   B. $1\frac{2}{3}$
   C. 3
   D. $6\frac{1}{3}$

5. A teacher counts test grades twice and quiz grades once. What is the average grade for a student with a test grade of 88 and with quiz grades 90 and 82?
   A. 88
   B. 87
   C. 86
   D. 85

Test: 88 88 (counted TWICE)

Quiz: 90 82

Find the average:

6. A teacher weights 3 grades with certain percents: tests 50%, homework 20%, and classwork 30%. If Sam's tests average is 86, homework average is 95, and classwork average is 90, what is Sam's grade?
   A. 87
   B. 88
   C. 89
   D. 90

→ multiply by -1.

CW 90 ( ) =
HW 95 ( ) =
Test 86 (0.5) =
+

7. A teacher weights 3 grades with certain percents: tests 45%, homework 15%, and projects 40%. If Jamie's tests average is 80, homework average is 98, and projects average is 92, what is Jamie's grade?
   A. 87.5
   B. 90
   C. 88.5
   D. 92

8. A scientist watches a wetland for woodpeckers. He stayed for half an hour on day 1 and saw 4 woodpeckers, 45 minutes on day 2 and saw 3 woodpeckers, and 1 hour on day 3 and saw 6 woodpeckers. How many does he see on average per hour?
   A. 4
   B. $\frac{13}{3}$
   C. $10\frac{1}{4}$
   D. $4\frac{5}{9}$

SKIP

For questions 9 and 10, use the data from the table.

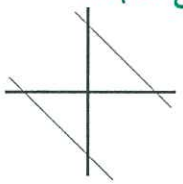
Event	Multiplicity	Average Event Outcome
A	5	42
B	7	35.7
C	13	18.9
D	9	51.6

9. What is the average of the outcomes from events A and C to the nearest hundredth?
   - A. 25.32
   - B. 30.45
   - C. 60.90
   - D. 45.78

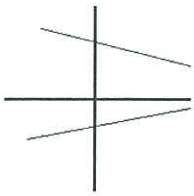
10. What is the average, to the nearest hundredth, of the outcomes from all of the events?
   - A. 37.05
   - B. 34.41
   - C. 33.85
   - D. 35.63

11. Which of the following graphs represents a system with no solution? graphs will never intersect.

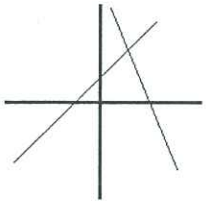
A.



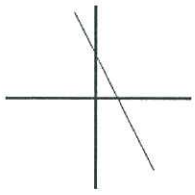
B.



C.



D.



12. Paul tried to solve the system of equations:

$$8x - 6y = 9$$
$$-4x + 3y = -5$$

by multiplying the second equation by 2 and adding the result to the first equation to eliminate x. His work looked like this:

$$8x - 6y = 9$$
$$-8x + 6y = -10$$
$$0 = -1$$

→ Is this true?

What does this result mean?

- E. Paul made an error in his work.
- F. The solution of the system is (0, -1).
- G. The system has no solution.
- H. The system has an infinite number of solutions.

13. (-2,4) is a solution to which of the following systems?

A. $\begin{cases} 2x + 3y = -10 \\ x - 2y = -4 \end{cases}$ A

$2(-2) + 3(4) = -10$

$-4 + 12 = -10$

$8 \neq -10$

B. $\begin{cases} 2x + 3y = 8 \\ x - 2y = -10 \end{cases}$

C. $\begin{cases} 2x + 3y = 2 \\ x - 2y = 8 \end{cases}$ B

D. $\begin{cases} 2x + 3y = 5 \\ x - 2y = 1 \end{cases}$

C

D

14. At what point (x, y) do the two lines $x = 2y - 8$ and $4x + y = 13$ intersect?

SUBSTITUTE!!

$4(2y - 8) + y = 13$

$8y - 32 + y = 13$

E. (2,5)
F. (2,–5)
G. (–2,5)
H. (–2,–5)

* Solve for y
* Plug y back in & solve for x

15. What is the y value of the solution to the system $\begin{cases} 2x - 3y = 11 \\ 5x - 6y = 26 \end{cases}$?

E. 1
F. 4
G. -1
H. -5

$\begin{array}{r} 4x - 6y = 22 \\ -(5x - 6y = 26) \\ \hline -x = -4 \end{array}$

$x = 4$

PLUG back in & solve for y!

16. Carl is taking an algebra quiz. He is required to solve the system:

$\begin{cases} 4x - 3y = 15 & (1) \\ 5x + 2y = 9 & (2) \end{cases}$

Which of the following would *not* be a correct way for Carl to begin solving the system?

A. Multiply equation (1) by 2 and equation (2) by 3; then add the results.
B. Multiply equation (1) by -5 and equation (2) by 4; then add the results.
C. Multiply equation (1) by 5 and equation (2) by -4; then add the results.
D. Multiply equation (1) by 5 and equation (2) by 4; then add the results.

* You want to multiply one of the equations to get the coefficients to be the same.

17. A scientist observed a thermometer starting at zero degrees. The thermometer moved a certain number of degress (F) by the first observation and another number of degrees (S) from the first to the second observation. The equations below describe the observations.

$9(4F + 10S = 20)$

$10(6F + 9S = 6)$

* You need F! So cancel S!

What is the temperature at the first observation?

E. -4
F. -5
G. 4
H. 5

$\ominus \; 36F + 90S = 180$

$60F + \square \quad \square$

① Subtract both sides
② Solve for F

18. Pencils cost 25 cents each, while markers cost 1.15 cents each. Andrea buys 10 items and spends a total of $5.20. How many pencils does she buy?

E. 7
F. 5
G. 3
H.

19. A movie theater sells tickets for $9.00 each. Senior citizens receive a discount of $3.00. One evening the theater sold 636 tickets and took in $4974 in revenue. How many tickets were sold to senior citizens?

E. 386
F. 250
G. 125
H. 511